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ABSTRACTS OF ARTICLES FROM UNAVAILABLE SOVIET SCIENTIFIC AND TECHNICAL PERIODICALS, (THREE)

[Comment: This report presents abstracts taken from issues of the Soviet periodical Referativnyy Zhurnal published March-June 1954. These abstracts are of articles originally published in Soviet scientific and technical serial publications which are not known to be available outside the Soviet Orbit.

The following form is used for each abstract in this report:
General subject, specific subject (Soviet abstract number)
Name of unavailable periodical, volume and/or issue number, date, pages
Author of article
Title of article (Language, if other than Russian)
Abridgment of abstract (Source number)

The source number in parentheses at the end of each abstract refers to the list of sources appended to this report.]

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STATE		NAVY		NSRB		DISTRIBUTION							
ARMY		AIR		FBI									

I. ASTRONOMY

Astrometry, Photographic Astrometry (3400)
Soobshch. Gos. Astron. Inst. Im. Shternberga, No 94, 1953, pp 12-26
Bugoslavskaya, Ye. Ya.
Photographic Observations of Minor Planets

Presents 35 accurate positions reduced to equinox 1950.0 of 6 minor planets, obtained from measurements of photographs made with the astrograph of Shternberg Observatory (F = 1.6 m), 1949-1952.(1)

Astrometry, Determination of Constants (3378)
Soobshch. Gos. Astron. Inst. Im. Shternberga, No 94, 1953, pp 3-11
Podobed, V. V.
Correction of Errors in the Inclination and Azimuth of the Horizontal Axis due to Irregularity of the Pivot Shape

Attempts to obtain direct corrections of azimuth and inclination by interference method, taking under consideration that interaction of pivots with contact rod differs from interaction of pivots with bearings and level suspensions.(1)

Astronomical Optics (4010)
Izv. AN Turkmenskoy SSR, No 6, 1953, pp 93-95
Dzhumaniyazov, V.
Investigation of the Penetrating Ability of Eight Objectives

The penetrating ability was evaluated according to the magnitude of stars leaving a legible trace. Photographs were made at Ashkhabad and Firyuz and the objectives used were Sonnar, Xenon, Tessar, Victar, Industar, and FED. Author concludes that short-focused objectives are more efficient than long-focused ones.(2)

Astrophysics, Astrophotometry (3441)
Izv. Glav. Astron. Observ. v. Pulkove, Vol 19, No 151, 1953, pp 69-96
Mikhelson, N. N.
Self-Recording Compensation Isophotometer

Describes apparatus using two light beams emanated from the light source. One beam hits a photographic plate and the other a photographic wedge, and both converge on a cathode-ray tube. If both beams are equal they are recorded on light-sensitive paper.(1)

Astrophysics, Observations of Variables (3850)
Byull. Stalinobadskoy Astron. Observatorii, No 8, 1953, pp 25-29
Solov'yev, A. V.
The Eclipsing Variable TY Capricorni

Evaluates the brightness of TY Capricorni from 298 photographic plates of Stalinobad Observatory obtained 1938-1952. Also uses results from other investigations.(2)

Astrophysics, Observations of Variables (3851)
Bull. Stalinobadskoy Astron. Observatorii, No 7, 1953, pp 29-31
Yerleksova, G. Ye.
The Eclipsing CC Herculi

Eighty-eight evaluations of brightness of CC Herculi were made from Stalinobad photographic plates of 1948-1952, and the mean curve of brightness plotted. The min was found J.D. 2433497.005 and the limits of brightness variation max = 10 m 06 and min. = 12 m 07. A secondary min was not found.(2)

Solar System, Comets (3567)
Byull. Stalinobadskoy Astron. Observ., No 5, 1953, pp 3-16
Dobrovolskiy, O. V.
On the Theory of Comet Shapes

Indicates a computational error overlooked by S. V. Orlov in his formulas for the distance of the upper shell of a comet from its nucleus. Considers heads of comet to be of spherical shape.(1)

Solar System, Meteors (3986)
Izv. AN Turkmenskoy SSR, No 5, 1953, pp 93-100
Shtepan, V. Ye.
Some results of Investigation of Telescopic Meteors

Lists data obtained from observations of telemeteors in 1952 and 1953 in the city of Chardzhou: daily variations, distribution in visible brightness and color, and a catalog of 10 radiants.(2)

Solar System, Meteors (3987)
Byull. Stalinobadskoy Astron. Observatorii, No 8, 1953, pp 21-24
Bakharev, A. M.
On Errors in Observation of Telemeteors

Author and O. V. Dobrovolskiy studied errors in observation of telemeteors in the northern part of the sky with 12-fold magnifying binoculars. The differences in trajectory tracing were 0m 2 for right ascension and 1' for declination and 4-5° in trajectory direction. The error increases with the brightness of the meteor.(2)

Solar System, Meteors (3993)
Izv. AN Turkmenskoy SSR, No 6, 1953, pp 95
Savrukhin, A. P.
May Aquarides 1951 According to Observations at Ashkhabad

Observations were made on 7 and 8 May and 15 meteors of the gamma stream of Aquarius were recorded. The coordinates of the radiant were found: right ascension = 337° and declination = -1° (1950.0).(2)

Theoretical Astrophysics, Structure of Stellar Atmospheres (3480)
Izv. Glavnoy Astron. Observ. v Pulkove, 19, 4, No 151, 1953, pp 1-33
Sofronitskiy, A. V.
Physical Nature of Subgiant Satellites in Close Eclipsing Stars

Analyzes peculiarities of luminosity curves of close eclipsing binaries explained by light absorption of the main star by the extended atmosphere of the satellite subgiant and its gas stream. Ninety-seven photometric observations of V505 Sagittari were processed at the Crimean Astrophysics Observatory.(1)

Stellar Astronomy, Stellar Catalogs (3887)
Byull. AN Gruz, SSR, Abastumanskaya Astrof. Observatoriya, No 14, 1953, pp 1-233
Nikonov, V. B.

Accurate color equivalents are deduced for 852 stars in the galactic zone of latitude 20°, limited in the region of galactic center by declination -24° and in the region of anticenter by longitude 180°. The atmospheric effect was eliminated, but not light absorption by interstellar media.(2)

II. PHYSICS

Electronics, Electronic and Ionic Emission (4021)
Dokl. AN Uzb. SSR, No 9, 1953, pp 13-16
Lovtsov, V. M. and Smirnov, A. S.
Investigation of the Dependence of the Coefficient of Ionic-Electronic Emission on the Atomic Weight of Bombarding Ions

In an earlier article on the same subject the authors had concluded that the most important single factor influencing the coefficient of ionic-electronic emission was the mass of the bombarding ions in relation to the mass of the particles of the target. In the present work they assert that the electronic structure of the target particles is of equal importance.(3)

Optics, Optical Media (4315)
Izv. AN Arm SSR, Vol 6, No 4, 1953, pp 47-52
Vardanyants, L. A.
Principles of the Empirical Verification of the Stereoconoscopic Method

The author defends the stereoconoscopic method of constructing stereographic projections against a number of objections raised by I. A. Ostrovskiy in Izv. AN SSSR, No 3, 1949. His main points are that the results of this method are dependable and the errors insignificant.(3)

Optics, Spectroscopy (4371)
Dokl. AN Azerb. SSR, Vol 9, No 6, 1953, pp 315-319
Khalilov, A. Kh.
Investigation of the Intensity of Lines in Raman Spectra of Light of Various Wave Lengths

Describes an experiment in which it was determined that the fourth power of the difference between the frequency of the incident light and the frequency of oscillation of molecules is the determining factor in the relationship between intensity and frequency in Raman spectra.(3)

III. CHEMISTRY

Biological Chemistry, Feeding and Nutrition (14881)
Zhivotnovodstvo, No 2, 1953, pp 106-107
Sattarov, D. Kh.
Composition of Milk After Feeding With the Green Mass From Vetch and Oats

Analysis of milk from cows fed with the green mass from vetch and oats indicated an increase in fat, protein, and ascorbic acid content, and a decrease in acidity.(4)

Biological Chemistry, Feeding and Nutrition (14910)
Zhivotnovodstvo, No 2, 1953, pp 101-105
Markova, K. V.; Al'tman, A. D.; Korchunov, V. Ye
The Effect of Green Supplements to Feeding on the Quality of Milk

Adding green supplements (buck-bean and herb mixture) to the regular diet of cows improves the quality of the milk by raising the fat and protein content.(4)

Chemical Technology, Protective Coatings (15585)
Poligraf. proiz-vo, No 2, 1953, pp 10-12
Glushko, V. D. and Got', O. I.
Increasing the Acid Resistance of the Chromate-Glue Copying Layer

The acid resistance of the chromate-glue copying layer can be increased by introducing a small amount of rosin to the copying solution.(4)

History of Chemistry, Agricultural Chemistry (14091)
Zemledeliye, No 3, 1953 pp 106-110
[No author given]
Outstanding Worker in Russian Agricultural Chemistry A. N. Engel'gardt (1832-1893); 60th Anniversary of His Death

A description of his life and work.(4)

IV. MATHEMATICS

Theory of Functions of a Complex Variable (3296)
Izv. AN Belorussk. SSR, No 5, 1953, pp 161-168
Popova, N. V.
A Differential Equation Whose Integrals Reflect the Semiplane Onto a Polygonic Region (A Region Whose Boundary Consists of Segments of Curves)

Presents a detailed discussion of results which had been published earlier without proof in Dokl. AN SSSR, Vol 91, No 4, 1953, pp 727-728.(5)

V. MECHANICS

General Mechanics, Mechanics of a System (3220)
Inzhenernyy Sbornik, Vol 16, 1953, pp 3-12
Bautin, N. N.
Dynamic Model of a Watch Movement Without a Natural Period

Considers a simplified dynamic model of a watch movement with two degrees of freedom without a natural period.(6)

General Mechanics, Mechanics of a System (3222)
Doklady Akademii Nauk Uzbek SSSR, No 9, 1953, pp 7-12
Shul'gin, M. F.
Equations of Motion for Holonomic Nonconservative Systems With a Linear Integral

[No abstract given.](6)

Hydromechanics, Filtration of Liquids and Gases in a Porous Medium (3397)
Inzhenernyy Sbornik, Vol 15, 1953, pp 169-176
Mkhitaryan, A. M.
Calculation of Filtration Through an Earth Embankment With a Groove and a Drain

Considers the problem of filtration in an earth embankment with a groove. Abstractor mentions that this problem was solved by another method by F. B. Nel'son-Skornyakov (Izv. AN SSSR, Otd Tekh Nauk, No 9, 1943, p 10).(6)

Hydromechanics, Filtration of Liquids and Gases in a Porous Medium (3402)
Doklady Akademii Nauk Azerbaydzhan SSR, Vol 9, No 11, 1953, pp 629-636
Yes'man, I. G.; Agalarov, I. S.; Mamedova, T. G.
Relation of the Porosity of Rock to the Viscosity of a Filterable Liquid

Presents the experimental investigations of the porosity of sands during filtration of water, and also of transformer, turbine, and spindle oil, conducted in the Institute of Power Engineering, Azerbaydzhan SSR. Criticizes existing presentations on the independence of coefficients of porosity from the nature of the filterable liquid.(6)

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SOURCES

(1.) Referativnyy Zhurnal -- Astronomiya i Geodeziya, No 5, 1954

(2.) Referativnyy Zhurnal -- Astronomiya i Geodeziya, No 6, 1954

(3.) Referativnyy Zhurnal -- Fizika, No 4, 1954

(4.) Referativnyy Zhurnal -- Khimiya, No 3, 1954

(5.) Referativnyy Zhurnal -- Matematika, No 5, 1954

(6.) Referativnyy Zhurnal -- Mekhanika, No 5, 1954

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